

Intermediate variations may be indicated by the use of dashes beside the figures.

Thus we may represent the different series as follows:—

S. dichotoma series.

	<i>p.</i>	<i>c.</i>	<i>l.</i>	<i>r.</i>	
<i>S. dichotoma</i> (Lamx.)	2	0	1	1	Jurassic.
<i>S. granulata</i> , M.-Edw. (non auct.)	2'	0'	1	1	Cretaceous.
<i>S. divaricata</i> , Reuss	2'	0'	1'	0''	Miocene.
<i>S. trahens</i> , Couch (<i>S. granulata</i> , Johnst.)	2''	0''	1	2	Recent.

S. dichotomoides series.

	<i>p.</i>	<i>c.</i>	<i>l.</i>	<i>r.</i>	
<i>S. dichotomoides</i> (d'Orb.)	1	2	1	0	Jurassic.
<i>S. plicata</i> , d'Orb.	1	2'	1	0	Cretaceous. (Or- namentation differs.)
<i>S. vesiculosa</i> (Mich.)	1	2''	1	0	Miocene.

S. Waltoni series.

	<i>p.</i>	<i>c.</i>	<i>l.</i>	<i>r.</i>	
<i>S. Waltoni</i> , Haime	1	0	2	0	Jurassic.
<i>S. longiscata</i> , d'Orb.	1''	0	2	0	Cretaceous.
<i>S. Reussi</i> , n. nom.*	2	0	2	0	Miocene.

Each of these three sets of formulæ shows a gradual increase in the degree of development of the distinguishing characters. This fact is clearly brought out by the formulæ. In some species the later types, however, are simpler than their Cretaceous representatives, for the genus attained its maximum in the Mesozoic, and has been on the wane throughout the Cainozoic. The different stages may be called either species or varieties. It probably does not matter which name is adopted, so long as the differences between them are marked and the forms grouped together in series round the best-known type.

XXVII.—*Descriptions of Two new Species of Pieridæ captured by Captains Cayley Webster and Cotton in New Georgia, Solomon Islands.* By H. GROSE SMITH.

Delias georgiana.

Male.—*Upperside*. Anterior wings white, with the costal margin, costal and subcostal nervures black; the third sub-

* *Aulopora divaricata*, Reuss (non Roemer), Foss. Polyp. Wien. Tert. 1847, p. 53, pl. vii. fig. 18.

costal nervule very broadly black; the apical area broadly black, the inner edge of which is irrorated with white and extends rather obliquely as far as the extremity of the lowest median nervule, whence to the posterior angle it becomes linear; between the veins near the apex are five white streaks, of which the third is the longest and broadest, the others being more or less irrorated with black scales. Posterior wings white, with the outer fourth from the apex to the inner margin black, the black area being widest in the middle and its inner edge irregular and irrorated with grey scales.

Underside. Anterior wings white, with the black area more extended than on the upperside, and invading the upper part of the cell, where, towards the base, it is irrorated with white and tinged with yellow; the upper discocellular nervule is black; the rows of white spots in the apical black area are much larger and more distinct than on the upperside and six in number, with a narrow marginal whitish streak between the two lowest median nervules. Posterior wings with the basal two thirds yellow, shading into white towards the apex; the outer third black, with a submarginal row of six greyish-white bars, angulated externally in the middle.

Head and thorax black, clothed with long white hairs; abdomen white.

Expanse of wings $2\frac{1}{4}$ inches.

Belongs to the group of *Delias isse*, Cram.

One specimen only. In Mr. Grose Smith's collection.

Appias gisco.

Male.—Upperside. Both wings pale yellow, with very broad black margins. On the anterior wings the basal fourth is densely irrorated with grey scales; the black area extends broadly along the costa and covers the apical and outer marginal fourth, terminating on the inner margin at three fourths distance from the base; its inner edge on the disk is deeply indented between the veins. On the posterior wings the outer fourth from a little above the apex to a little above the anal angle is black, with its inner edge rather irregular and irrorated with yellow scales.

Underside as above, but on the anterior wings the basal area is yellow, clouded with grey. On the posterior wings the inner three fourths is orange-yellow, slightly darker orange on the costal margin; the outer fourth being brown-black as above.

Antennæ black; head and thorax dark grey; abdomen grey above, yellowish grey below.

Expanse of wings 2 inches.

Belongs to the group of *A. panda*, Godt., to the female of which on the upperside it bears considerable resemblance.

One specimen only. In Mr. Grose Smith's collection.

XXVIII.—*Descriptions of new Species of Land-Shells from New Guinea.* By EDGAR A. SMITH.

THE species about to be described were collected by Mr. William E. Armit during an exploring expedition on the north-east coast of British New Guinea, on Mount Maneau, on the mainland, and on Mount Moratau, Goodenough Island; also at the back of Cloudy Bay, on the south coast. It is to be regretted that the exact locality of the species can only be given in one or two instances.

1. *Nanina amblytropis* *.

Testa orbicularis, subacute carinata, spira brevi convexe conoidea, anguste perforata, supra fusca, haud nitida, subtus pallidior, corneo-lutescens, polita; anfractus 6, lente crescentes, leviter convexusculi, inferne ad suturam impressi, submarginati, lineis incrementi obliquis arcuatis, prope suturam subplicatis, striisque microscopicis radiantibus et minute rugulosis sculpti, ultimus ad peripheriam acute angulatus, subtus nitens, haud microscopice striatus, lineis incrementi modo sculptus; apertura obliqua, angulatim sublunata, intus albida vel livido-alba; peristoma tenue, margine columellari leviter incrassato, superne expanso, foramen umbilicale semiobtegente.

Diam. maj. 23 millim., min. 20, alt. 13; apertura 7 alta, 11½ lata.

I am inclined to think that this species does not exceed the dimensions given above. The spire is convex and terminates in an obtuse apex. The sculpture consists, besides the lines of growth, of exceedingly fine wrinkly striæ in the same direction. It is this minute striation which produces the dull surface. Underneath, where they are not present, the shell is highly glossy.

2. *Nanina lissorhophe* †.

Testa *N. Cairni* ‡ similis, sed spira minus conoidea, anfractibus

* ἀμβλύς, blunt; ῥόπισ, keel.

† λισσός, smooth: ῥαφή, a seam or suture.

‡ Ann. & Mag. Nat. Hist. 1887, vol. xix. p. 417, pl. xv. fig. 5.